

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
18 September 2003 (18.09.2003)

PCT

(10) International Publication Number
WO 03/076760 A2(51) International Patent Classification⁷: E21B 7/26

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(21) International Application Number: PCT/EP03/01744

(22) International Filing Date: 7 March 2003 (07.03.2003)

(25) Filing Language: English

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
02075911.4 8 March 2002 (08.03.2002) EP

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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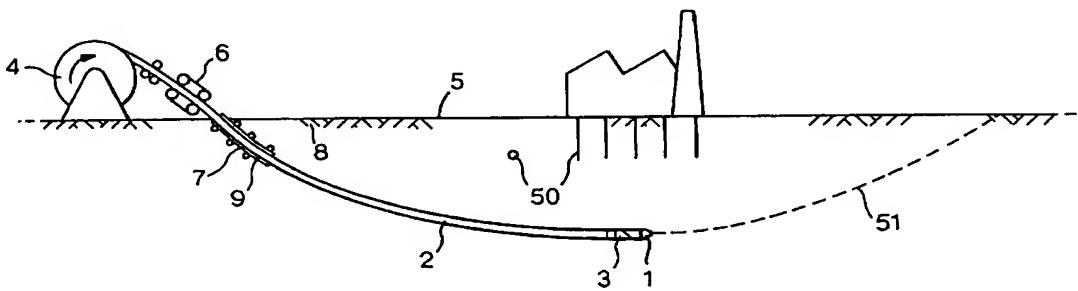
Published:

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— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STEERABLE SOIL PENETRATION SYSTEM



WO 03/076760 A2

(57) Abstract: A steerable soil penetration system comprises a steerable penetration head, which compacts and does not cut away the surrounding soil and which is connected to an elongate flexible tubing such that the orientation of the penetration head can be varied relative to the tubing. The elongate tubing and/or a downhole hammer or tractor pushes the penetration head through the subsurface formation. Preferably the tubing is surrounded by a narrow annulus so that buckling of the tubing is inhibited and the tubing protects the pierced hole against caving in. Optionally the tubing is circumferentially expanded after completion of the piercing process thereby increasing the width of the pierced hole and providing a permanent hole lining.